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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☐ Responsive to communication(s) filed on _____.

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-62* is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-20,23-51 and 54-62* is/are rejected.

7) ☒ Claim(s) *21,22,52 and 53* is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on *09 July 2003* is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a) ☐ All b) ☐ Some * c) ☐ None of:

    1. ☐ Certified copies of the priority documents have been received.

    2. ☐ Certified copies of the priority documents have been received in Application No. _____.

    3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
   Paper No(s)/Mail Date *10/20/03*.

4) ☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they

do not include the following reference sign(s) mentioned in the description: 1, 6, & 7.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to

the Office action to avoid abandonment of the application. Any amended replacement

drawing sheet should include all of the figures appearing on the immediate prior version

of the sheet, even if only one figure is being amended. Each drawing sheet submitted

after the filing date of an application must be labeled in the top margin as either

"Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are

not accepted by the examiner, the applicant will be notified and informed of any required

corrective action in the next Office action. The objection to the drawings will not be held

in abeyance.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

7. Claim 12, 15, 18, 19, 23-27,43, 46, 49, 50, 54, 55, 56-58 rejected under 35

U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and

distinctly claim the subject matter which applicant regards as the invention.

Claims 12 & 43 is the method and the procedure recited in claim 1, wherein the

quantity of update messages to be formatted is unequal to the quantity of formatted

Update messages to be enqueued. A computer-readable medium comprising one or more sequences of instructions, which when executed by one or more processors, cause the one or more processors to carry out the steps recited in claim 12. This is vague and can be considered to be obvious as well. The quantity is not being specific enough.

Claims 15 & 46 is the method and the procedure recited in claim 1, wherein the quantity of update messages to be formatted is programmable, the method further comprising: if an amount of available memory is less than a threshold amount, ignoring the programmable quantity of quantity of update messages to be formatted; and formatting a pre-determined number of update messages. A computer-readable medium comprising one or more sequences of instructions, which when executed by one or more processors, cause the one or more processors to carry out the steps recited in claim 15. This is considered vague for the fact that there is a predetermined number being used but that is not disclosed of what that predetermined number is.

Claim 18, 19, 49 and 50 The method and procedure recited in claim 1, wherein the quantity of update messages is a first quantity of update messages and the quantity of update messages to be formatted is programmable, said method further comprising: programmatically receiving the quantity of formatted update messages; and after formatting said quantity of the first quantity of update messages and after enqueueing said quantity of formatted update messages, performing the steps of claim 1 on a second quantity of update messages for the first peer entity. The method recited in claim 18, wherein the step of formatting the second quantity of update messages

comprises formatting a predetermined quantity of update messages, and ignoring the

programmed quantity of messages to be formatted. A computer-readable medium

comprising one or more sequences of instructions, which when executed by one or

more processors, cause the one or more processors to carry out the steps recited in

claim 18. A computer-readable medium comprising one or more sequences of

instructions, which when executed by one or more processors, cause the one or more

processors to carry out the steps recited in claim 19. These claims are unclear due to

the quantity of updated messages are not specific enough. The predetermined number

is not a specific enough specification for updated messages.

Claims 23, 24, 54, & 55 is " A method for updating a plurality of peer entities in a

communication network comprising: processing an update message for a first peer

entity with a first plurality of update messages, wherein said processing of an update

message for the first peer entity comprises enqueueing formatted update messages to a

queue associated with said first peer entity, and wherein said enqueueing may be

suspended if a programmable quantity of formatted update messages have been

enqueued; and if the first peer entity has been updated with all of the plurality of update

messages, updating a second peer entity with a second plurality of update messages".

This is considered vague and not definite because the enqueueing may be suspended if

a programmable quantity of formatted update messages have been enqueued. This is

not clearly specifying how enqueing is functioning.

Claims 25-27, & 56-58 is "A method for updating a plurality of peer entities in a

communication network comprising: processing an update message for a first peer

entity with a first plurality of update messages, wherein said processing of an update message for the first peer entity comprises formatting one or more of the first plurality of update messages, and said formatting may be suspended if a programmable quantity of the first plurality of update messages have been formatted; and if the first peer entity has been updated with all of the plurality of update messages, updating a second peer entity with a second plurality of update messages." This is also considered vague due to said formatting may be suspended if a programmable quantity of the first plurality of update messages have been formatted. This is not clearly specifying how the formatting is being suspended.

Claim 59-62 An apparatus comprising: means for formatting update messages; an means for caching associated with a peer entity, a programmable quantity of formatted update messages, to be advertised to said peer entity, cached in said means for caching. The apparatus of claim 59, further comprising: means for queueing associated with the peer entity, wherein said means for queueing is to be enqueued with at least one of formatted update messages. The apparatus of claim 60, further comprising means for replicating the formatted update messages. The apparatus of claim 60, further comprising means for transmitting a formatted update message from the queue to the peer entity. The phrase "means for queueing associated with peer entityr, wherin said means for queueing is to be enqueued with at least one of formatted update messages" is considered unclear. Furthermore these claims are not being specific to how they are being used for the claimed invention.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form

the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claim 28 rejected under 35 U.S.C. 102(b) as being anticipated by Chen(6392997).

Claim 28 states "An apparatus comprising: a mechanism for formatting, among a

quantity of update messages, a programmable quantity of said update messages to

establish a quantity of formatted update messages; and a cache associated with a peer

entity, the quantity of formatted update messages, to be advertised to said peer entity,

stored in the cache. "

This is being anticipated under Chen. Chen states that "according to the inventive

technique, the interdomain router generates a routing update message comprising a

message data portion 600 and further generates a plurality of headers 610a-n, each

associated with a neighboring peer router. Each header is a data structure containing a

plurality of pointers, one which contains an address that references the beginning of the

message data portion structure 600 stored in a memory, such as memory 204, of the

interdomain router; this pointer 162a-n. " The memory is being considered as cache by

the examiner. (column 6 line 37)

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

5.   Claims 1-11, 13-17, 20, 29-33, 35, 36, 38, 40-42, & 44, 51   are being rejected

under 103(a) as being unpatentable over Chen (6392997) in view of Wong (5974465).

Claim 1 states among a quantity of update messages, formatting one or more of the

updated messages to establish a quantity of formatted update messages for a peer

entity, is one of a peer group and a peer, wherein the quantity of the formatted update

messages is less than or equal to quantity of the formatted update messages is less than or equal to the quantity of update messages; and among the formatted update messages, enqueing to a queue, one or more formatted update messages, wherein the quantity of enqueued formatted update messages is less or equal to the quantity of formatted update messages, and wherein at least one of the quantity of formatted update messages and the quantity of the enqued formatted update messages is a programmable quantity.

Chen teaches a quantity of update messages, formatting one or more of the update messages to establish a quantity of formatted update messages for a peer entity, wherein said peer entity is one of a peer group and a peer. Wherein the quantity of the formatted update messages is less than or equal to quantity of update messages; is less than or equal to quantity of update messages. Chen discloses " In accordance with inventive technique, the interdomain router generates a routing update message comprising a message data portion and further generates a plurality of headers, each associated with a neighboring peer router. "(column 3 line 10) .

Chen however does not teach about a queue or enqueing feature.

Wong teaches queue and enqueing for, the formatted update messages enqueing to a queue, one or more formatted update messages, to establish a quantity of enqueued formatted update messages, wherein the quantity of enqueued formatted update messages is less or equal to the quantity of formatted update messages. Wong discloses " The software then determines whether the new outbound packet is to be currently stored in the queue. This determination is based on a function of the priority of

the packet, the number of buffers which were reserved for priorities are higher than the priority of the current packet, then the current packet is stored in the queue(Wong column 5 line 27-32).

Wong is combined to the Chen to show a message or data packet can be stored temporarily in a queue for the purposes of not elevating congestion on a network. The queue can be added to the memory of the primary application in order to modify it into a method for enqueing formatted updated messages. Queueing is well known in the art for a cost effective way to store and manipulate messages in order to not overload the network. Thus it would have been obvious to one with ordinary skill in the art, from the previous teaching that queueing can be used in order to prioritize or store data with memory in a router which is provided in Chen's invention.

Claims 2 & 33 are the method and processor to carry recited in claim 1, further comprising storing the formatted update messages in a cache associated with the peer entity". This is taught by the primary application Chen. Chen discloses " Specifically, the router generates the actual data contained in the update message and stores that data in a memory location of the router"(column 2 line 26-28)

Claims 3-5, 10, 11, 30, 34-36, 41, & 42 are the methods and processors to carry out recited in a claim 1, comprising of replicating one of the formatted update messages to establish a replica formatted update message. The method recited in claim 3, wherein said peer entity is a peer group, further comprising enqueueing said replica formatted update message to a queue associated with a peer in said peer group. The method

recited in claim 4, further comprising transmitting a replica formatted update message from the queue associated with the peer group to a peer in the peer group. The method recited in claim 1 wherein the quantity of update messages to be formatted is a first quantity of update messages to be formatted, wherein the quantity of formatted update messages to be enqueued is programmable, wherein said peer entity is a first peer entity, the method further comprising: programmatically receiving the quantity of formatted update messages to be enqueued ; after all of the formatted update messages are enqueued in said step of enqueueing messages for said first peer entity, formatting a second quantity of update messages for a second peer entity. The system of Claim 1, further comprising one or more relational interfaces as alternatives to programmatic interfaces, each relational interface being associated with a corresponding relational data store and exposed within the data integration server during a bulk data transfer to enable the data integration server to read data entities directly from and write data entities directly to the corresponding relational data store during the bulk data transfer without using a programmatic interface. This is taught by the primary application Chen. Chen discloses "The updated message is update message is then replicated for a second neighbor by creating a second header containing the message pointer and the field pointer; this time, however, the second header contains a second value to be loaded into the referenced field for the second neighbor. (column 3 line 27-32)

Claims 6, 7, 8, 37 & 38 are the method and processor to carry out recited in claim 1, wherein each of the update messages is formatted is enqueued. This is taught by

primary reference Chen. Chen states, According to the inventive technique, the

interdomain router generates a routing update message comprising a message data

portion 600 and further generates a plurality of headers 169 a=n, each associated with a

neighboring peer router. (column 6 line 37-42)

Claims 9, & 40 are the method and processor to carry out recited in claim 1, wherein the

quantity of update messages to be formatted is programmable, wherein said peer entity

is a first peer entity, wherein the quantity of update messages is a first quantity of

update messages, the method further comprising: programmatically receiving the

quantity of update messages to be formatted; and after all of the first quantity of update

messages are formatted in said step of formatting messages for said first peer entity,

formatting a second quantity of update messages for a second peer entity. This is

taught by primary reference Chen. Chen discloses the router also generates a first

header that contains the message pointier and the field pointer, along with a first value

to be loaded into the referenced field of the message data portion for the first neighbor.

The update message is then replicated for a second neighbor by creating a second

header containing the message pointer and the field pointer; this time however, the

second header contains a second value to be loaded into the referenced field for the

second neighbor. (column 3 line 23-32)

Claims 13 & 44 are the method and processor to carry out recited in claim 1, wherein

the quantity of update messages to be formatted is a programmable, the method further

comprising: programmatically receiving the quantity of update messages to be

formatted; and after of the programmed quantity are formatted in said step of formatting,

transmitting enqueued messages from the queue. This is taught by the primary

reference Chen. Chen discloses, Immediately before transmitting the routing message

to each neighbor, the content of the referenced field in the message data portion is

replaced by the value contained in the header for each neighboring peer router.

Thereafter, the message is transmitted to each neighbor.(column 3 line 34-48).

Claim 14 and 45 the method and process recited in claim 1, wherein the quantity of

formatted update messages to be enqueued is programmable, the method further

comprising: programming the quantity of formatted update messages to be enqueued;

and after the formatted update messages of the programmed quantity are enqueued in

said step of enqueueing, transmitting enqueued messages from the queue. A

computer-readable medium comprising one or more sequences of instructions, which

when executed by one or more processors, cause the one or more processors to carry

out the steps recited in claim 14.   This is being taught by Wong. Wong discloses "As

discussed above, there may be instances when it is critical to transmit certain data

packets." (Column 2 line 10-12)

Claim 15 and 46 the method and process recited in claim 1, wherein the quantity of

update messages to be formatted is programmable, the method further comprising: if

an amount of available memory is less than a threshold amount, ignoring the

programmable quantity of quantity of update messages to be formatted; and formatting

a pre-determined number of update messages. A computer-readable medium

comprising one or more sequences of instructions, which when executed by one or

more processors, cause the one or more processors to carry out the steps recited in

claim 15. This is taught by Wong. Wong states "When the queue is nearly full, less

important packets are discarded, and only those packets with the requisite degree of

priority are stored in the queue buffers which were reserved." (column 2 line 45-48)

Claim 16, 20, 47 and 51 the method and process recited in claim 1, wherein the

quantity of formatted update messages to be enqueued is programmable, the method

further comprising: if an amount of available memory is less than a threshold amount,

ignoring the programmable quantity of messages to be enqueued; and enqueueing a

pre-determined number of messages. The method recited in claim 1, wherein the step

of enqueueing comprises a step of suspending enqueueing of formatted update

messages, if a memory limit is reached during formatting of update messages. A

computer-readable medium comprising one or more sequences of instructions, which

when executed by one or more processors, cause the one or more processors to carry

out the steps recited in claim 16. A computer-readable medium comprising one or more

sequences of instructions, which when executed by one or more processors, cause the

one or more processors to carry out the steps recited in claim 20. This taught by Wong.

Wong teaches "If the queue buffers are full, a data packet may be dropped, or the

computer may have to periodically monitor the queue buffers to determine whether a

slot has opened up." (column 2 line 5-8)

Claims 17 & 48 are the method and processor to carry out recited in claim 1, wherein

said method is performed by a border gateway protocol process or application of a

network device operating system. This is taught by Chen. Chen discloses an

interdomain routing protocol, such as the Border Gateway Protocol (BGP, is used to

perform interdomain routing (for the internetwork layer) through the computer network. (column 5 line 17-20). Wong is added to the Chen to show a message or data packet can be stored temporarily in a queue for the purposes of not elevating congestion on a network. The queue can be added to the memory of the primary application in order to modify it into a method for enqueing formatted updated messages. Queueing is well known in the art for a cost effective way to store and manipulate messages in order to not overload the network.

Claim 29 the apparatus of claim 28, further comprising: a queue associated with the peer entity, wherein said queue is to be enqueued with at least one of formatted update messages.

Chen states that "according to the inventive technique, the interdomain router generates a routing update message comprising a message data portion 600 and further generates a plurality of headers 610a-n, each associated with a neighboring peer router. Each header is a data structure containing a plurality of pointers, one which contains an address that references the beginning of the message data portion structure 600 stored in a memory, such as memory 204, of the interdomain router; this pointer 162a-n. " The memory is being considered as cache by the examiner. (column 6 line 37)

Chen however does not teach about a queue or the enqueing feature.

Wong teaches queue and enqueing for, the formatted update messages enqueing to a queue, one or more formatted update messages, to establish a quantity of enqueued formatted update messages, wherein the quantity of enqueued formatted

update messages is less or equal to the quantity of formatted update messages. Wong

discloses " The software then determines whether the new outbound packet is to be

currently stored in the queue. This determination is based on a function of the priority of

the packet, the number of buffers which were reserved for priorities are higher than the

priority of the current packet, then the current packet is stored in the queue(Wong

column 5 line 27-32).

Wong is combined to the Chen to show a message or data packet can be stored

temporarily in a queue for the purposes of not elevating congestion on a network. The

queue can be added to the memory of the primary application in order to modify it into a

method for enqueing formatted updated messages. Queueing is well known in the art

for a cost effective way to store and manipulate messages in order to not overload the

network. Thus it would have been obvious to one with ordinary skill in the art, from the

previous teaching that queueing can be used in order to prioritize or store data with

memory in a router which is provided in Chen's invention.

Claim 30 The apparatus of claim 29, further comprising a mechanism for replicating the

formatted update messages. This is taught by Chen. Chen states that is, the BGP

router may geerate an update message for one neighbor and then replicate that

message for all other neighbors in accordance with a conventional replication process.

(column 2 line 22)

Claim 31 the apparatus of claim 29, further comprising means for transmitting a

formatted update message from the queue to the peer entity. This is taught by Chen.

Chen states a single data portion of the update message is created and only a specific

field of that message is customized for each neighbor prior to transmitting the message

to that neighbor. (column 3 line 40)

Allowable Subject Matter

6. Claim 21, 22, 52, & 53 are objected to as being dependent upon a rejected base

claim, but would be allowable if rewritten in independent form including all of the

limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Gerald Smarth whose telephone number is (571)270-

1923. The examiner can normally be reached on Monday-Friday(7:30am-5:00pm)est.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Jeff Pwu can be reached on (571)272-6798. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

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published applications may be obtained from either Private PAIR or Public PAIR.

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you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JEFFREY PWU
PRIMARY EXAMINER